



# BROAD EXAMINATIONS®

## P.6 MATHEMATICS EXAMINATION

### END OF TERM I 2024

Time allowed: 2 hours 30 minutes

Pupil's Name: .....

School Name: .....

District Name: .....

Read the following instructions carefully:

1. This paper is made up of two sections: A and B.
2. Section A has 20 questions (40 Marks)
3. Section B has 12 questions (60 Marks)
4. Answer ALL questions in both sections A and B.
5. All answers must be written in the space provided in blue or black ball point pens and ink. Only diagrams should be done in pencil.
6. Unnecessary crossing of answers will lead to loss of marks.
7. Any handwriting, which cannot be easily read, may lead to loss of marks.
8. Do not fill anything in the boxes indicated for Examiners' use only.

FOR EXAMINERS' USE ONLY		
PAGES	MARKS	SIGN
Page 2		
Page 3		
Page 4		
Page 5		
Page 6		
Page 7		
Page 8		
<b>TOTAL</b>		

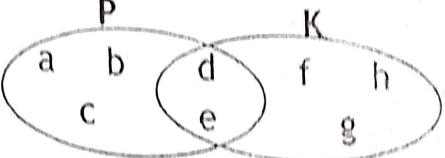
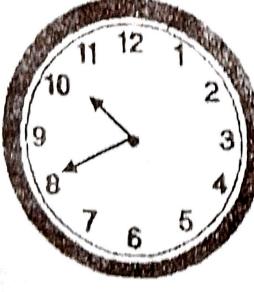
Teacher's comment to the learner

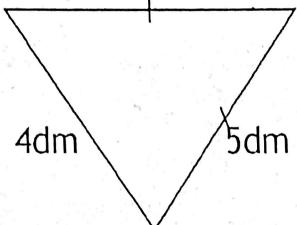
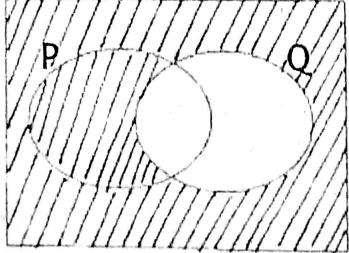
.....  
.....  
.....  
.....

Approved by:

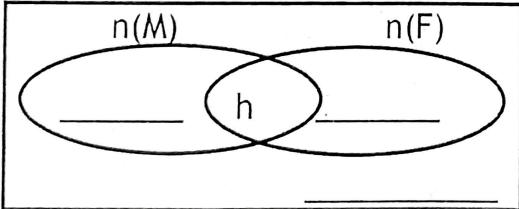
Team Head Mathematics Department

**SECTION .A. (40 MARKS)**

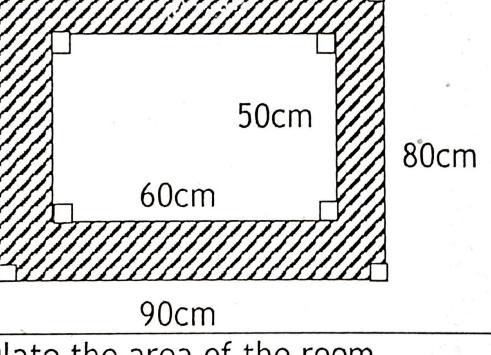
1.	Divide: $18 \div 2$	2.	Write 19 in Roman numerals.
3.	Find the square of 4.	4.	Add: $\frac{1}{2} + \frac{1}{4}$
5.	Study the venn diagram below and answer questions that follow. 	6.	Kayumbu bought a radio at sh.40,000 and later sold it at sh.42,000. calculate Kayumbu's profit.
7.	Write the morning time shown on the clock face below. 	8.	Convert 200grams to kilograms.
9.	Without dividing, show whether 123 is exactly divisible by 3.	10.	Find the mean of 6, 5, 8 and 9.

11.	Convert 390 minutes to hours.	12.	Use $<$ , $>$ or $=$ to complete the statement below correctly. $168 \div 2$ _____ $25 + 23$
13.	Find the perimeter of the figure below.	14.	Write "sixty thousand twenty three" in figures.
			
15.	How many quarter litre bottles can be got from a 10 litre jerrycan?	16.	Name the solid figure drawn below.
17.	Arrange the following integers in ascending order $-2, +3, -1, +4, -3$	18.	Multiply 267 by 12
19.	Describe the shaded region below.	20.	Okoth had sh.6500 and bought a pen at sh.700. Find his balance.
			

**SECTION .B. (60 MARKS)**

21.	In a school of 800 pupils, $\frac{3}{5}$ are boys and the rest are girls.		
(a)	If $\frac{1}{3}$ of the boys are in lower primary, how many boys are in lower primary?	(b)	How many girls are in the school?
(c)	How many more boys than girls are in the school?		
22.	(a) Find the value of 2 in $3214_{\text{five}}$	(b)	(06 Marks) Change $124_{\text{five}}$ to base ten.
23.	In a party attended by 50 people, 20 ate meat (M), 30 ate fish (F), 5 people did not eat any of the two sauces, h ate both meat and fish.		
(a)	Complete the venn diagram below.	(b)	(04 Marks) How many people ate both meat and fish?
			(06 Marks)

24.	<p>(a) The LCM of two numbers is 72 and their GCF is 6. If the first number is 24, find the second number.</p> <p>(b) Find the least number of pens that can be shared by either 12 or 9 pupils leaving no remainder.</p>	(04 Marks)															
25.	<p>Use <math>&lt;</math>, <math>&gt;</math> or <math>=</math> to complete the following statements.</p> <p>-17 _____ +10</p> <p>+100 _____ -60</p> <p>-20 _____ +20</p> <p>-8+4 _____ +4 - 8</p>	(4 Marks)															
26.	<p>The table below shows how Mr. Mugumya spent his monthly salary of sh.100,000 when buying some items from Mr. Kayanja's supermarket.</p> <table border="1" data-bbox="207 916 1393 1304"> <thead> <tr> <th data-bbox="207 916 631 983">Quantity</th><th data-bbox="631 916 985 983">Unit cost</th><th data-bbox="985 916 1393 983">Amount</th></tr> </thead> <tbody> <tr> <td data-bbox="207 983 631 1073">4kg of rice</td><td data-bbox="631 983 985 1073">Sh.5000 per kg</td><td data-bbox="985 983 1393 1073">Sh. _____</td></tr> <tr> <td data-bbox="207 1073 631 1163">5 bars of soap</td><td data-bbox="631 1073 985 1163">_____ @ bar</td><td data-bbox="985 1073 1393 1163">Sh. 27500</td></tr> <tr> <td data-bbox="207 1163 631 1253">litres of cooking oil</td><td data-bbox="631 1163 985 1253">Sh.6000 per litre</td><td data-bbox="985 1163 1393 1253">Sh. 15000</td></tr> <tr> <td colspan="2" data-bbox="207 1253 631 1304"><b>TOTAL EXPENDITURE</b></td><td data-bbox="985 1253 1393 1304">Sh. _____</td></tr> </tbody> </table>	Quantity	Unit cost	Amount	4kg of rice	Sh.5000 per kg	Sh. _____	5 bars of soap	_____ @ bar	Sh. 27500	litres of cooking oil	Sh.6000 per litre	Sh. 15000	<b>TOTAL EXPENDITURE</b>		Sh. _____	(a) Complete the table above.
Quantity	Unit cost	Amount															
4kg of rice	Sh.5000 per kg	Sh. _____															
5 bars of soap	_____ @ bar	Sh. 27500															
litres of cooking oil	Sh.6000 per litre	Sh. 15000															
<b>TOTAL EXPENDITURE</b>		Sh. _____															
(b)	<p>Find his change.</p>	(06 Marks)															

27.	(a) The sum of four consecutive natural numbers is 90. Find the numbers.	(b)	Find the range of the numbers.
			(05 Marks)
28.	Using a ruler, a pencil and a pair of compasses only, construct a regular hexagon in a circle of radius 4.5cm.		
			(04 Marks)
29.	The figure below shows a carpet laid in a rectangular room. Use it to answer the questions that follow.		
	 <p>50cm 60cm 90cm 80cm</p>	(a)	Find the area of the carpet.
(b)	Calculate the area of the room.	(c)	Find the area of the room not covered by the carpet.
			(06 Marks)

30. Study the calendar for March of a certain year and use it to answer the questions that follow.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

- (a) Which month is shown on the calendar above?

(b)

What day was it on 11<sup>th</sup> of the above month?

- (c) How many weekends are in the above month?

(d)

On which day did the previous month end?

(04 Marks)

31. Given that k=4, b=6 and c=8. Find the value of;

(a)  $b + k$

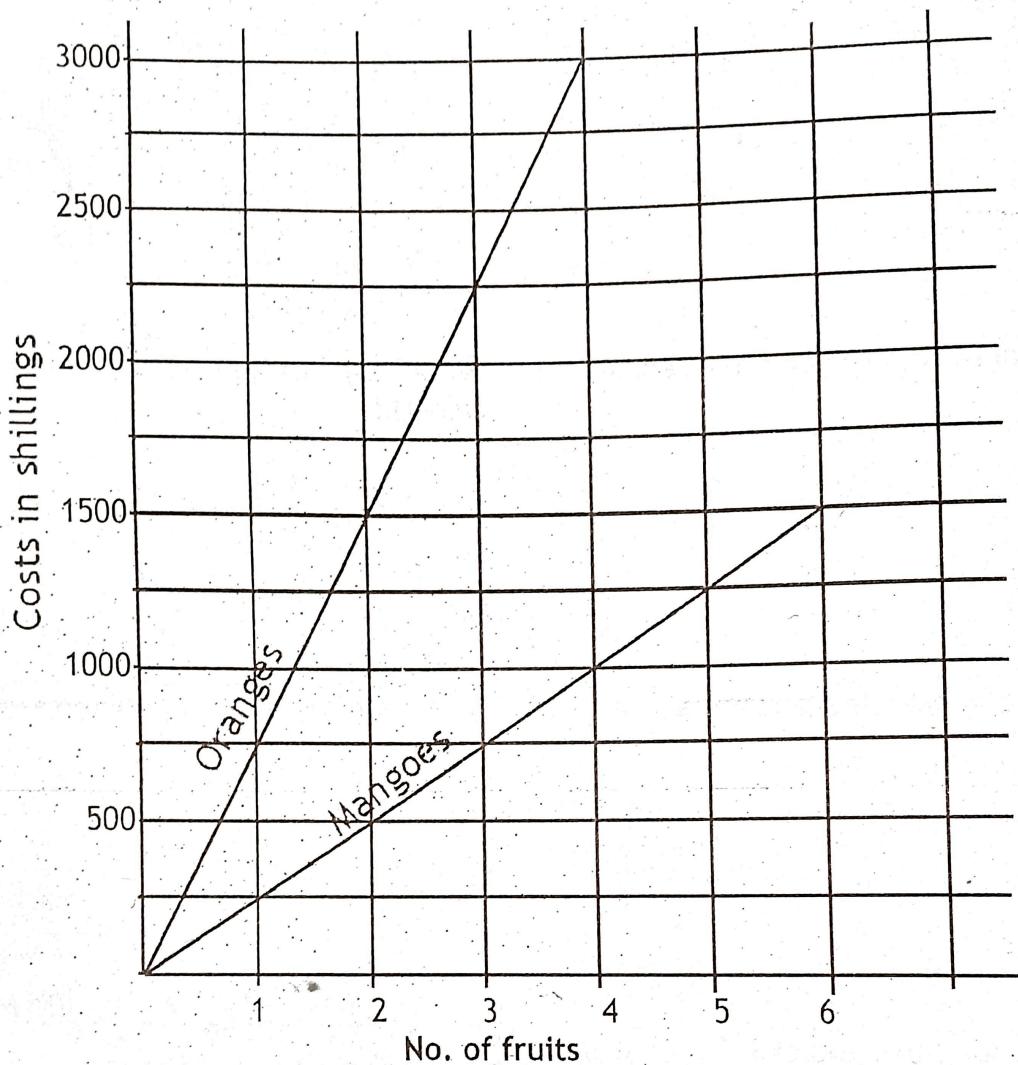
(c)  $ck - 5$

(c)  $\frac{Kbc}{2}$

(05 Marks)

32.

The graph below shows the cost of oranges and mangoes in a certain market. Use it to answer the questions that follow.



(a) Find the cost of 3 oranges.

(b) John bought 2 oranges and 4 mangoes. How much did he pay?

(c) If Okulutu had sh.3,000, how many mangoes did he buy?

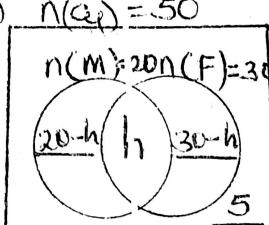
(6 Marks)

END

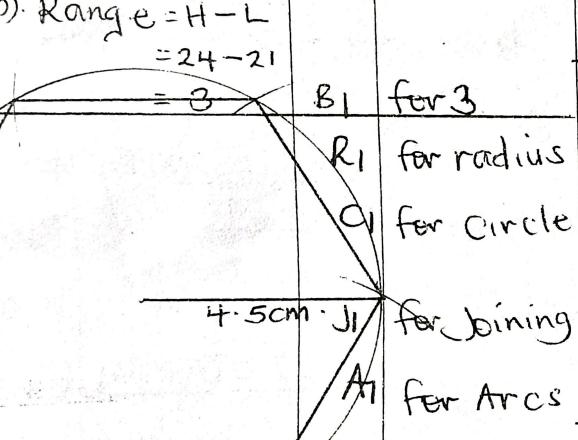
BROAD EXAMINATIONS GUIDES

P.6 MATHEMATICS END OF TERM I 2024

Qn.	Class	Solution	Marks	Comments	Qn.	Class	Solution	Marks	Comments	
1.	P-2	$18 \div 2 = 9$	B-2	for 9	9.	P-6	NC 123	Sum of digits $1+2+3=6$	B-1	for 6
2.	P-4	$i9 = 10 + 9$ $= x - 1x$ $= x1x$							6 is a multiple of 3	
3.	P-5	$4^2 = 4 \times 4$ $= 16$	M-1 A-1	for $4 \times 4$ for 16	10.	P-5	Mean = $\frac{6+5+8+9}{4}$ $= \frac{28}{4}$	M-1	for 123 is divisible by 3	
4.	P-4	$\frac{1}{2} + \frac{1}{4} = \frac{2+1}{4}$ $= \frac{3}{4}$	M-1 A-1	for L cm for $\frac{3}{4}$						
5.	P-5	$P-K = \{a, b, c\}$ $N(P-K) = 3$	B-1 B-1	for $\{a, b, c\}$ for 3	11.	P-4	60 min $\rightarrow$ 1 hr 390 min $\rightarrow$ $\frac{13}{4}$ hr $= \frac{13}{2}$ hr	M-1	for $\frac{390}{60}$	
6.	P-4	$\frac{Sh\ 42000}{Sh.\ 2000} = \frac{42000}{2000}$	M-1 A-1	for arrangement for sh 2000						
7.	P-5	10:40 a.m	B-2	for 10:40 a.m						
8.	P-4	1000g $\rightarrow$ 1kg $200g \rightarrow \frac{200}{1000} \checkmark$	M-1	for dividing	12.	P-3	$168 \div 2 > 25 + 23$ $84 - 48$	M-1	for $>$	
	0.2kg	A-1		for 0.2kg	13.	P-3	$P = 5dm + 5dm + 4dm$ $= 14dm$	A-1	for adding for 14dm	

Qn.	Class	Solution	Mrks	Comments	Qn.	Class	Solution	Mrks	Comments
14.	P.3	60,023	B2	for 60,23			(b) $\begin{array}{r} 7810 \\ -480 \\ \hline 320 \end{array}$ girls	M1	for 800-480
15.	P.5	$10 \div \frac{1}{4} = 10 \times 4$ $= 40$ $= 40$ bottles	M1	for $10 \times 4$			(c) $\begin{array}{r} 480 \\ -320 \\ \hline 160 \end{array}$ boys	A1	for 320
16.	P.2	Cone	B2	for Cone	22.	P.5	a) $\begin{array}{r} \text{fff fff } 0 \\ 3214 \text{ five} \\ 2 \times 5 \times 5 \\ / 10 \times 5 \\ 50 \end{array}$	06	
17.	P.5	-3, -2, -1, -3, +4	B2	follow through			b) $\begin{array}{r} \text{fff } 0 \\ 124 \text{ five} \\ (1 \times 5 \times 5) + (2 \times 5) + (4 \times 1) \\ 25 + 10 + 4 \\ 35 + 4 \\ 39 \text{ ten} \end{array}$	M1	for $2 \times 5 \times 5$
18.	P.3	$\begin{array}{r} 287 \\ \times 12 \\ \hline 534 \\ +287 \\ \hline 3204 \end{array}$	M1	for multiplying			c) $\begin{array}{r} 25 + 10 + 4 \\ 35 + 4 \\ 39 \text{ ten} \end{array}$	A1	for 50
19.	P.5	Set Q'	B2	for Q'				M1	for expanding
20.	P.4	$\begin{array}{r} \$500 \\ -\$700 \\ \hline \$500 \end{array}$	M1	for subtracting	23.	P.6(a)	$n(A) = 50$ 	04	
21.	P.5	a) $\begin{array}{r} 3 \times 160 \\ \hline 480 \end{array}$ $3 \times 160$ $= 480$ boys ✓ $\begin{array}{r} 160 \\ \times 4 \\ \hline 160 \end{array}$ 160 boys ✓	B1	for 480			b) $\begin{array}{r} n(M) = 20 \\ n(F) = 30 \\ h = 5 \\ 20-h \quad h \quad 30-h \\ 5 \end{array}$	B1	for 20-h
								B1	for 30-h
								B1	for 5
								M1	for equation
								M1	for subtracting
								A1	for 5

Qn.	Class	Solution	Marks	Comments	Qn.	Class	Solution	Marks	Comments
24	P.E	a) $2^nd \text{ no} = \frac{18}{\cancel{2} \cancel{4}} \times \cancel{3}^1$ $\therefore 18$	M1	for $\frac{72 \times 6}{24}$			Cooking oil Sh. 15000 Sh. 10000 1; 2 litres ✓	B1	for $2 \frac{1}{2} L$
		b) $\begin{array}{r rr} 2 & 1 & 2 & 9 \\ \hline 2 & 6 & 9 \\ 3 & 3 & 9 \\ \hline 3 & 1 & 3 \\ \hline & 1 & 1 \end{array}$ $2 \times 2 \times 3 \times 3$ $4 \times 9$ 3 dispens	M1	for prime factorisation			Total expt. Sh. 20,000 Sh. 27,500 + Sh. 1,500 Sh. 62,500 ✓	B1	for sh. 62,500
			A1	for 36			b) Sh. 99 - Sh. 100,000 Sh. 62,500 Sh. 37,500	M1	for subtracting
25	P.5	$17 < +10$ $+100 > -60$ $-20 < +20$ $-8+4 = +4-8$ $-4 = -4$	B4 B1 B1 B1	for < for > for < for =	27		a) Let the first no. be $n$ . 1st 2nd 3rd 4th sum $n \quad n+1 \quad n+2 \quad n+3 \quad 90$ $n+n+1+n+2+n+3=90$ $n+n+n+1+2+3=90$ $4n+6=90$ $4n=84$ $n=21$	A1	for sh. 37,500
26	P.5	Rice a) sh. 5000 $\times 4$ sh. 20,000 ✓ SocP sh. 5500 sh. 25,500	B1	for sh. 20,000			$4n+6-6=90-6$ $4n=84$ $n=21$	M1	for collecting like terms for 21

Qn.	Class	Solution	Mrks	Comments	Qn.	Class	Solution	Mrks	Comments
		No.s are 21, 22, 23, 24.	B1	for 21, 22, 23, 24	30.	P.3	(a) March. (b) Friday. (c) 4 weekends. (d) Monday.	B1 B1 B1 B1	for March for Friday for 4 for Monday
		b). Range = H - L $= 24 - 21$ $= 3$	B1	for 3	31.	P.5	(a) $htk = 6 + 4$ $= 10$  (b) $ck - 5 = (8 \times 4) - 5$ $= 32 - 5$ $= 27$  (c) $\frac{Kbc}{2} = \frac{4 \times 6 \times 8}{2}$ $= 24 \times 4$ $= 96$	B1 M1 A1	for 10 for $(8 \times 4) - 5$ for 27 for $\frac{4 \times 6 \times 8}{2}$ for 96
25.	P.5		R1 C1 4.5cm · J1 A1	for radius for circle for joining for Arcs					
29.	P.5	(a) $Area = L \times W$ $= 60 \text{ cm} \times 50 \text{ cm}$ $= 3000 \text{ cm}^2$ M1  (b) $Area = L \times W$ $= 90 \text{ cm} \times 80 \text{ cm}$ M1 $= 7200 \text{ cm}^2$ A1  (c) Area not covered $7200 \text{ cm}^2$ $- 3000 \text{ cm}^2$ $4200 \text{ cm}^2$	M1 M1 M1	for 60x50 for $3000 \text{ cm}^2$ for $7200 \text{ cm}^2$ for subtracting	32.	P.5	(a) $sh 2000$ + $sh 250$ <u><math>sh 2250</math></u>  (b) $sh 1500$ + $sh 1000$ <u><math>sh 2500</math></u>  (c) $\frac{12}{60}$ $sh 3000$ $sh 250$ \$1 12 mangoes	05 M1 A1 M1 M1 A1 M1	for adding for $sh 2250$ for adding for $sh 2500$ for $\frac{3000}{250}$ for 12